IN THE CLAIMS

Please amend the claims as follows:

1. (Previously Presented) A method of encoding a plurality of input signals (l, r) to generate corresponding encoded data, the method comprising steps of:

(a) processing, using a first processor, the input signals (l, r) to determine first parameters ($\varphi 2$) describing at least one of relative phase difference and temporal difference between the signals (l, r), and applying these first parameters ($\varphi 2$) to process the input signals to generate corresponding intermediate signals;

(b) processing, using a second processor, the intermediate signals and/or the input signals (l, r) to determine second parameters describing rotation of the intermediate signals required to generate a dominant signal (m) and a residual signal (s), said dominant signal (m) having a magnitude or energy greater than that of the residual signal (s), and applying these second parameters to process the intermediate signals to generate the dominant (m) and residual (s) signals;

(c) quantizing, in a quantizer, the first parameters, the second parameters, and encoding at least a part of the dominant signal (m) and the residual signal (s) to generate corresponding quantized data; and

(d) multiplexing, using a multiplexer, the quantized data to generate the encoded data.

2. (Previously Presented) The method as claimed in Claim 1, wherein only a part of the residual signal (s) is included in the encoded data.

3. (Previously Presented) The method as claimed in Claim 2, wherein the encoded data also includes one or more parameters indicative of which parts of the residual signal are included in the encoded data.

4. (Currently Amended) The method as claimed in Claim 1, wherein steps (a) and (b) are implemented in the first and second processors by complex rotation with the input signals (l[n],r[n]) represented in the frequency domain (l[k], r[k]).

5. (Previously Presented) The method as claimed in Claim 4, wherein steps (a) and (b) are performed independently on sub-bands of the input signals (l[n], r[n]).

6. (Previously Presented) The method as claimed in Claim 5, wherein other sub-bands not encoded by the method are encoded using alternative coping techniques.

7. (Previously Presented) The method as claimed in Claim 1, wherein, in step (c), said method includes a step of manipulating the residual signal (s) by discarding perceptually non-relevant

time-frequency information present in the residual signal (s), said manipulated residual signal (s) contributing to the encoded data and said non-relevant information corresponding to selected portions of a spectro-temporal representation of the input signals (l, r).

8. (Previously Presented) The method as claimed in Claim 1, wherein the second parameters in step (b) are derived by minimizing the magnitude or energy of the residual signal (s).

9. (Previously Presented) The method as claimed in Claim 1, wherein the second parameters are represented by way of inter-channel intensity difference parameters and coherence parameters (IID, ρ).

10. (Previously Presented) The method as claimed in Claim 1, wherein the second parameters are represented by way of a rotation angle α and an energy ratio of the dominant (m) and residual (s) signals.

11. (Previously Presented) The method as claimed in Claim 1, wherein, in steps (c) and (d), the encoded data is arranged in layers of significance, said layers including a base layer conveying the dominant signal (m), a first enhancement layer including first and/or second parameters corresponding to stereo

imparting parameters, a second enhancement layer conveying a representation of the residual signal (s).

12. (Previously Presented) The method as claimed in Claim 11, wherein the second enhancement layer is further subdivided into a first sub-layer for conveying most relevant time-frequency information of the residual signal (s) and a second sub-layer for conveying less relevant time-frequency information of the residual signal (s).

13. (Previously Presented) An encoder for encoding a plurality of input signals (l, r) to generate corresponding encoded data, the encoder comprising:

(a) first processing means for processing the input signals (l, r) to determine first parameters ($\varphi 2$) describing at least one of relative phase difference and temporal difference between the input signals (l, r), the first processing means being operable to apply these first parameters ($\varphi 2$) to process the input signals to generate corresponding intermediate signals;

(b) second processing means for processing the intermediate signals and/or the input signals (l, r) to determine second parameters describing rotation of the intermediate signals required to generate a dominant signal (m) and a residual signal (s), said dominant signal (m) having a magnitude or energy greater than that of the residual signal (s), the second processing means being

operable to apply these second parameters to process the intermediate signals to generate the dominant (m) and residual (s) signals;

(c) quantizing means for quantizing the first parameters ($\varphi 2$), the second parameters (α; IID, ρ), and at least part of the dominant signal (m) and the residual signal (s) to generate corresponding quantized data; and

(d) multiplexing means for multiplexing the quantized data to generate the encoded data.

14. (Previously Presented) The encoder as claimed in Claim 13, including processing means for manipulating the residual signal (s) by discarding perceptually non-relevant time-frequency information present in the residual signal (s), said manipulated residual signal (s) contributing to the encoded data and said perceptually non-relevant information corresponding to selected portions of a spectro-temporal representation of the input signals.

15. (Previously Presented) The encoder as claimed in Claim 13, wherein the residual signal (s) is manipulated, encoded and multiplexed into the encoded data.

16. (Previously Presented) A method of decoding encoded data to regenerate corresponding representations of a plurality of input signals (l', r'), said input signals (l, r) having been previously

encoded to generate said encoded data, the method comprising steps of:

(a) de-multiplexing, using a demultiplexer, the encoded data (100) to generate corresponding quantized data;

(b) processing, using a first processor, the quantized data to generate corresponding first parameters ($\varphi 2$), second parameters (α; IID, ρ), and at least a dominant signal (m) and a residual signal (s), said dominant signal (m) having a magnitude or energy greater than that of the residual signal (s);

(c) rotating, using a second processor, the dominant (m) and residual (s) signals by applying the second parameters (α; IID, ρ) to generate corresponding intermediate signals; and

(d) processing, using a third processor, the intermediate signals by applying the first parameters ($\varphi 2$) to regenerate representations of said input signals (l, r), the first parameters ($\varphi 2$) describing at least one of relative phase difference and temporal difference between the signals (l, r).

17. (Previously Presented) The method as claimed in Claim 16, including in step (b) a further step of appropriately supplementing missing time-frequency information of the residual signal (s) with a synthetic residual signal derived from the dominant signal (m).

18. (Previously Presented) The method as claimed in Claim 16, wherein the encoded data includes parameters indicative of which parts of the residual signal (s) are encoded into the encoded data.

19. (Previously Presented) The method as claimed in Claim 16, wherein the decoder decodes parts of the encoded signal requiring supplementation by detecting empty areas of the encoded signal when represented in a time/frequency plane.

20. (Previously Presented) The method as claimed in Claim 16, wherein the decoder decodes parts of the encoded signal requiring replacement or supplementation by detecting data parameters indicative of empty areas.

21. (Previously Presented) A decoder for decoding encoded data to regenerate corresponding representations of a plurality of input signals (l', r'), said input signals (l, r) having been previously encoded to generate the encoded data, the decoder comprising:

(a) de-multiplexing means for de-multiplexing the encoded data to generate corresponding quantized data;

(b) first processing means for processing the quantized data to generate corresponding first parameters ($\varphi 2$), second parameters (α; IID, ρ), and at least a dominant signal (m) and a residual signal (s), said dominant signal (m) having a magnitude or energy greater than that of the residual signal (s);

(c) second processing means for rotating the dominant (m) and residual (s) signals by applying the second parameters (α; IID, ρ) to generate corresponding intermediate signals; and

(d) third processing means for processing the intermediate signals by applying the first parameters ($\varphi2$) to generate corresponding input signals (l, r), the first parameters ($\varphi2$) describing at least one of relative phase difference and temporal difference between the signals (l, r).

22. (Previously Presented) The decoder as claimed in Claim 21, wherein the second processing means is operable to generate a supplementary synthetic residual signal derived from the decoded dominant signal (m) for providing information missing from the decoded residual signal (s).

23. (Previously Presented) The decoder as claimed in Claim 22, wherein the first processing means is operable to determine which parts of the residual signal (s) have been decoded for synthesizing missing non-decoded parts of the residual signal for generating substantially the entire residual signal (s).

24. (Cancelled).

25. (Cancelled).

26. (Previously Presented) A computer-readable medium having a program recorded thereon, said program causing computing hardware to execute the method as claimed in Claim 1.

27. (Previously Presented) A computer-readable medium having a program recorded thereon, said program causing computing hardware to execute the method as claimed in Claim 16.